

**NOISE-INDUCED HEARING LOSS: A SENSELESS WORKPLACE  
HAZARD IN KILANG GULA FELDA PERLIS SDN. BHD.**

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## ABSTRAK

Tujuan kajian ini adalah untuk menilai dan mengenalpasti faktor-faktor yang membawa kepada kehilangan pendengaran di kalangan para pekerja di Kilang Gula Felda Perlis Sdn. Bhd. Kajian ini telah dilakukan di kalangan 170 pekerja di Kilang Gula Felda Perlis Sdn. Bhd. Data dikumpulkan melalui soal selidik dan dianalisis dengan menggunakan *Statistical Package for Social Science* (SPSS). Sepanjang analisis statistik dilakukan - analisis korelasi, didapati terdapat hubungan yang signifikan antara tiga pembolehubah tidak bersandar iaitu Alam Sekitar, Kawalan Risiko, Tahap Kesedaran Diri dan Sokongan Sosial terhadap pembolehubah yang bersandar iaitu Kehilangan Pendengaran Akibat Bunyi Bising (NIHL) manakala satu lagi pembolehubah tidak bersandar (Jentera) tidak mempunyai hubungan yang signifikan dengan NIHL. Dalam masa yang sama, didapati bahawa tiada perbezaan yang dilaporkan bagi NIHL di antara pekerja lelaki dan pekerja perempuan. Kajian ini juga telah mengenalpasti hubungan yang signifikan antara NIHL dan tempoh perkhidmatan pekerja di Kilang Gula Felda Perlis Sdn.Bhd.

## ABSTRACT

The purpose of this study is to evaluate and identify factors that lead to hearing loss to workers who works in the factory in Kilang Gula Felda Perlis Sdn. Bhd. This study was done among 170 workers in Kilang Gula Felda Perlis Sdn. Bhd. Data were gathered through questionnaires and was being analyzed by using Statistical Package for Social Science (SPSS). Throughout the statistical analysis – correlation analysis, it is found that there is a significant relationship between the three independent variables namely Environment, Risk Control, Self Awareness and Social Support with the dependent variables – Noise Induced Hearing Loss (NIHL) while another independent variables (Machinery) does not have significant relationship with NIHL. In the same time, it is also found that there is no difference in the NIHL reported between male and female workers. This study also identifies a significant relationship between NIHL and the length of service group at Kilang Gula Felda Perlis Sdn. Bhd.

## ACKNOWLEDGEMENT

First, I would like to express my appreciation to Allah S.W.T, who has granted me the strength and ability to complete this study.

I would like to extend my gratitude to my project supervisor, Dr. Nor Azimah Chew Abdullah who has been very supportive and encouraging in guiding me to complete this research paper. Her professional advices given throughout the completion of this research will not be forgotten.

I am also grateful for the encouragement and cooperation that I received from the management of KGFP Sdn. Bhd. especially from En. Mohamad Amri b. Sahari, CEO of KGFP and also to my family for the unconditional love in supporting my quest for knowledge has been extraordinary. The journey in completion of this project paper is not lonely at all with the support from my dearest classmates who have shown me their support and assistance in the accomplishment of this educational endeavor.

Not forgetting all dearest lecturers throughout my master who has shared their knowledge throughout my study in UUM. I am sure that I could not have arrived at this stage without them.

Lastly, I would like to present my humble appreciation and gratefulness to all the people who made this journey possible. I am in debt to those who knowingly and unknowingly.

Thank you.

Badrul bin Bakar

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## ABBREVIATIONS

ACGIH	American Conference of Government Industrial Hygienists
BBS	Behaviour-Based Safety
BLS	Bureau of Labour Statistics
CA	Cronbach Alpha
DALY	Disability-adjusted life years
DOSH	Department of Occupational Safety and Health
FMA	Factories and Machinery Act
KGFP	KilangGula Felda Perlis
NIHL	Noise Induced Hearing Loss
NIOSH	National Institute of Occupational Safety and Health
ONIHL	Occupational Noise Induced Hearing Loss
OSHA	Occupational Safety and Health Act
OSHA's	Occupational Safety and Health Administration's
PEL	Permissible Exposure Limit
TLV	Threshold Limit Values



## CHAPTER 1

### INTRODUCTION

#### 1.0 INTRODUCTION

Noise is one of the physical environmental factors affecting people's health in today's world. Noise is generally defined as the unpleasant sounds which disturb the human being physically and physiologically and cause environmental pollution by destroying environmental properties (Melnick, 1979, pg. 721).

Noise-induced hearing loss (NIHL) is the leading cause of occupationally induced hearing loss in industrialized countries (Seidman, 2011). According to National Institutes of Health Consensus Development Conference Statement, sound levels of less than 75 dB(A) are unlikely to cause permanent hearing loss, while sound levels about 85 dB(A) with exposures of 8 hours per day will produce permanent hearing loss after many years. Although the precise mechanism involved in the destruction of cochlear hair cells is not known, there is compelling evidence that reactive oxygen metabolites and cochlear hypoperfusion are responsible. NIHL is preventable for most situations, but this requires education and training of the work force and employers. In addition, hearing protection should be mandatory at all sites where sound levels routinely exceed 85 dB (Seidman, 2011).

Figure 1.1 summarizes the occupational contribution to the global burden of injury and disease of the individual occupational risk factors. This substantial burden is due to largely preventable

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